

ANNUAL REPORT

OF THE

OFFICER OF HEALTH

TO THE

CARDIFF

LOCAL BOARD OF HEALTH.

[1853]

CARDIFF:

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1854.

ANNUAL REPORT of the OFFICER of HEALTH to the CARDIFF LOCAL BOARD of HEALTH.

Cardiff, Jan. 26, 1854.

GENTLEMEN,

In presenting to you my Annual Report, I have endeavoured to furnish you with such data as may enable you to form an opinion of the probable amount of sickness and mortality during the past year; to detail in general terms the information relative to the sanitary condition of Cardiff that I may have obtained in the discharge of my duties, as your Officer of Health; to enumerate the various possible excitants of disease; the several localities in which they may exist; and, as far as I can, suggest for your consideration such means as may prevent or mitigate the effects of epidemics.

The population of Cardiff, according to the last census, amounted to 18,351, shewing an increase of 8 per cent. per annum on the previous ten years. Assuming the same rate of increase to have continued, the population may now be estimated at 21,000; but it is important to bear in mind that an unusually large proportion of this number is composed of mechanics, labourers, and another very numerous class exercising considerable influence on the sanitary condition of this town—I mean the mendicant Irish,—a class which may be computed to exceed 3,000 in number.

The gross mortality in Cardiff, during the year 1853, was 644, or 30.66 per thousand; it therefore considerably exceeds the average mortality of all England, which, according to the returns of the Registrar General, is stated to be 20.383.

Having been permitted access to the Register Book of Deaths, I have made an analysis, and have compiled the three following tables, to which I shall have frequent occasion to refer. The first represents the number of deaths at particular seasons of the year,—the division of the seasons being in accordance with the plan adopted by the Registrar-General. In this table I distinguish the deaths resulting from disease, and those occasioned by accidents or other causes, and on which a coroner's investigation has taken place.

TABLE No. 1.

	Deaths from Disease.		Deaths from Accidents, &c.	
Winter ..	{ January	51	.....	3
	{ February	65	.....	3
	{ March	66	.....	6
		—182		—12
Spring ..	{ April	58	.....	8
	{ May	54	.....	5
	{ June	48	.....	5
		—160		—18
Summer .	{ July	39	.....	8
	{ August	43	.....	4
	{ September ..	36	.....	6
		—118		—18
Autumn..	{ October	29	.....	6
	{ November	50	.....	3
	{ December	45	.....	3
		—124		—12
		584		60
	Inquests	60		
	Total	644		

This table shews that the greatest rate of mortality occurs in the cold

quarter of winter and the variable temperature of spring, that it is less in the summer, and increases again towards the autumn; the seasons do not appear to operate more unfavourably in this than in other localities; it is, therefore, to other causes, we have to attribute the high rate of mortality in Cardiff.

Table No. 2 represents the mortality according to age, and Table No. 3 the immediate cause of death.

TABLE No. 2.

MORTALITY.

Under One Year	223
„ Two Years	33
„ Three Years	15
„ Four Years	17
„ Five Years	8
Five to Ten Years	23
Ten to Twenty	45
Twenty to Thirty	60
Thirty to Forty	69
Forty to Fifty	37
Fifty to Sixty	32
Sixty to Seventy	28
Seventy to Eighty	35
Eighty and upwards	19
	<hr/>
	644

TABLE No. 3.

Diseases of Brain and Nervous System.	Convulsions	67
	Hydrocephalus ..	11
	Inflam. of Brain	8
	Apoplexy	2
	Paralysis	4
	Epilepsy	3
		<hr/>
		95
Diseases of Respirative Organs.	Phthisis & Diseased Lungs }	111
	Bronchitis	24
	Inflam. of Lungs	32
	Pleurisy	1
	Croup	2
	Asthma	2
		<hr/>
		176
	Disease of Heart	2
	— Kidney	1
	— Womb	3
	— Stomach	3
Diseases of Abdominal Organs.	— Liver ..	8
	Inflam. of Bowels	4
	Stricture of	1
	Œsophagus }	
		<hr/>
		16
	Fever, Contd. and Typhus }	38
	— Puerperal	6
	— Scarlet ..	1
Epidemic	Measles	1
	Small Pox	42
Diseases.	Erysipelas	4
	Hooping Cough	20
	Diarrhoea and Dysentery .. }	22
	Cholera	5
		<hr/>
		139
	Scrofula	1
	Syphilis	4
Sporadic	Gangrene	2
	Hæmorrhage	1
Diseases.	Dropsy	9
	Atrophy & Mesentery disease }	53
		<hr/>
		70
	Accidents and Sudden Death }	60
	Hydrophobia ..	1
	Teething	10
	Unknown	23
	Cancer	3
	General Decay ..	34
	Other Diseases ..	11
		<hr/>
	Total	644

The first subject to which I have to call your attention is the extraordinary high rate of infant mortality, under one year of age, this being 223; and compared with the gross mortality, is as one in three, while in London it is one in five, and in rural districts, one in eight. It is to the lodging-house system I refer this high rate of infant mortality,—a system I shall have occasion to allude to again. The bulk of this mortality occurs in the localities inhabited by the Irish poor, and is attributable to their mode of living; the sexes live and occupy the same rooms indiscriminately, hence early marriage and illegitimate births. Accustomed from a tender age to all kinds of privations, with no regard to comfort and decency, such people are little restrained by a sense of providence. A marriage of improvidence is with them the *rule*,—a marriage of providence the *exception*. Their own constitutions, sapped by constant exposure to the vitiated atmosphere of their own crowded hovels, the weakly offspring, exposed to every influence such an atmosphere can engender, with little parental care, has feeble tenacity of life: the germs of scrofula develop their existence in the forms of atrophy, mesenteric disease, hydrocephalus, and convulsions; or, if it pass on for a short time beyond this period, the stunted, rickety form of the Irish mendicant, testifies the hard battle it had to fight, ere consumption closes its miserable existence.

I have next to direct your attention to diseases which are materially aggravated, and at times created, by removable causes, and are, therefore, more particularly the subject for sanitary comment: these are—

Convulsions and Hydrocephalus	78
Consumption and Diseased Lungs	111
The Epidemic Diseases	139
The Sporadic Diseases	70

398

The two first, dependent, as they often are, on scrofulous taints, are excited in a large proportion by removable causes: the epidemic and sporadic are almost entirely influenced by them. These causes are—

Indifferent drainage, filth, and impure accumulations, such as decaying animal and vegetable matter near dwellings, putrid mud and stagnant water, open drains, and overflowing privies and cesspools, and the overcrowded and unwholesome condition of the dwellings of the poor.

The absence of efficient drainage has for a considerable time occupied your attention, and I should not have alluded to it, inasmuch as means are now being adopted to remedy this evil, but that it is necessary to take it into consideration in explaining the amount of disease in this, as compared with other towns. Certain districts, and unfortunately those which previous experience has shown to be the localities in which epidemic disease is to be apprehended, are lower than the level of the sea at high water; there is, therefore, no natural course for the escape of the surface water; new streets are here being daily formed, house after house erected, and no provision in this respect made; the roadway unprepared or unmettalled; the soft natural material torn up by the carts employed in hauling; the streets, in front of the houses have lakes of stagnant water, putrid mud mixed with the refuse animal and vegetable matter, and waste water thrown by the occupants of every room, for each room contains a family: hence the large quantity contributed by every house: the space behind, allotted for a garden, is filled with overflowing cesspool soakings, and has usually a foul open drain or gutter: the atmosphere of the district becomes loaded with malarious exhalations, requiring but certain conditions to mark its character so as to produce either epidemic fevers or cholera, or diarrhoea and dysentery. That this malarious influence is constantly present is evinced by the manner in

which it attacks those who are exposed to it. The usual permanent inhabitants of the locality appear to be little affected by it, having become as it were acclimatised, but immediately the tone of health is interrupted, as by cold or over fatigue, that, which under other and ordinary circumstances would be but a temporary and trifling ailment, merges into fever: its effect is more convincingly shown in those who, coming from a pure and healthy district, are suddenly exposed to it: then, as I have repeatedly witnessed, every member of a family, within a short time, is seized with a form of gastric fever, confined merely to these individuals: it differs not in kind, but in extent, from that melancholy endemic that has recently told so distressingly and extensively in a neighbouring town. To remedy this evil as far as practicable has been one of the great objects I have sought to attain in those reports, which I have at intervals made to your Board, and I have the satisfaction of being enabled to-day to state that considerable improvement has been effected, and is still being made; the whole of the streets in the Newtown district, and the backlets of the houses in the Bute-town district, have been put in better order; and within the last few weeks the streets in the latter locality are being metalled with some degree of activity. Of course this improvement can only be temporary,—no real or permanent benefit can be obtained until these epidemic districts are properly drained; and these districts are fortunately on the Eastern and South-eastern sides of the Town, near to the contemplated exit of your proposed system of drainage, and, therefore, admitting its earliest application.

Connected with these, the exterior influences of disease, I have to direct your attention to the constant injurious accumulation of animal and vegetable matter, and ashes in the backlets behind the houses,—the difficulty experienced in carts passing through the streets has prevented to a considerable extent any possibility of preventing this. This condition of the streets is now being overcome; and I have to propose for your consideration the following plan, in order to economise time and labour in removing or preventing these accumulations:—It has been estimated that each house furnishes one cwt. of this material weekly, allowing from 30 to 40 houses to be in each street,—I propose that, on a certain day and at a stated hour, the dust-cart shall be at the end of a fixed street, every occupier of a house shall deposit or cause to be deposited his collection of ashes for the week at an appointed spot: to enable the occupier to do this at little cost and to facilitate the plan, there shall be men employed under your direction, but not paid by you, who shall receive one penny from every house for removing the ashes; having removed the ashes to the spot named, they shall assist in filling the carts. I calculate each man, having a wheelbarrow, might remove the ashes of from 35 to 40 houses daily; he would, therefore, earn, say, on an average, three shillings per day. The occupier of the house could, however, if he chose, deposit them himself; but I consider it would be more economical for him to pay the penny than to interrupt his ordinary labour.

I now pass on to the evils produced by the overcrowded lodging-houses. Their magnitude can only be estimated by those who have thoroughly investigated the subject. The number of these houses in Cardiff I have pretty correctly ascertained by returns obtained by Mr. Stockdale, and they are 279: allowing 16 inmates for each house, certainly below the average, this gives the gross number of 4464 persons exposed to all the evils, moral and physical, of over-crowded dwellings. To oppose themselves successfully to the risk of epidemic influence, persons require pure air and good ventilation as certainly as they do wholesome and sufficient food. To exist in an impure atmosphere is at all times highly dangerous, but the danger is much increased by breathing it

during the hours of sleep, when the nervous system is at rest, the pores of the skin unusually absorbent, and doors and windows being closed, the chance of inhaling the fresh air impossible, while the exhalations from the lungs and skin pollute the confined atmosphere; and this sows the seeds of gastric and other forms of fever in the unconscious sleeper. In such dwellings and under such circumstances it seems unnecessary to remark on the want of the comforts and decencies of civilized life; on the existence of misery and filth, or on the want of a sense of smell, the usual preservative from such abominations, all perception of noxious smells being lost by constantly living in dirt and wretchedness. The causes of this system are manifold, but among them in this town are the constant immigration of Irish paupers, who are for the most part indifferent to both comfort and cleanliness, and who feel that any roof over their heads is as much as they seek or expect: it would be difficult to overstate the evil effects on the sanitary condition of this town, arising from this single cause. The fact is proved by the excessively high ratio in which epidemic and contagious diseases are found among this class of the population. A strong proof of the effect of over crowding and want of ventilation was afforded on board the American ship "Eagle:" here the Cholera broke out, but confined its ravages to the steerage passengers, of whom a large proportion were attacked with diarrhoea, 21 with developed cholera, and 13 died. The cabin of this ship was large, commodious, clean, and well ventilated; and while the epidemic was raging in such close proximity to them, the passengers in this better conditioned part of the ship, enjoyed a complete exemption, not only from cholera but even diarrhoea.

The Lodging-house system is pernicious in every point of view—pernicious to those who indulge in the hope of a large rate of interest by a building investment, who, with but little capital, seek assistance by becoming borrowers and subscribing members to a building society, and, by its aid, erecting houses under circumstances to obtain exorbitant rents; without entering into the nature of these societies, I have learned that many have been materially disappointed in having to pay at the end of the year large sums, over and above their subscriptions and interest, for borrowed money, their share as partners to meet what is termed the losses sustained by the Society,—pernicious to the occupier, who being for the most part a labourer is obliged to sub-let each apartment to meet the excessive rent he has to pay; thus the houses in Ellen-street, Thomas-street, William-street, and streets of this description, average 6s. 10d. per week. The occupier of the room takes in lodgers to assist in contributing his quota,—and lastly, is pernicious to the rate-payers, inasmuch as the disease engendered by these houses necessitates, and presents the anomaly of a tenant of a house of £18 per year, on the first day's interruption of his labour, becoming an applicant for relief at the Board of Guardians.

To remedy these evils I have greatly reduced the number of inmates, but have still to suggest a revision of the Registered Lodging-houses, and a still greater reduction in the number of occupants allowed.

I have to report that, during the year 1853, 56 Lodging-house keepers have been summoned for an infringement of your regulations, a great proportion of whom have been fined, and others admonished.

During the last year, among the contagious diseases, small-pox has been productive of considerable mortality: this is owing to the carelessness evinced by the labouring class to the prophylactic measure of vaccination. The number of deaths from this disease were 42. The Legislature has happily taken the subject into consideration; and without going into the degree of perfection in the detail of the Compulsory Vaccination

Act, there can be no question that some such measure was urgently required.

I believe it also to be exceedingly desirable that the amount of immunity afforded by vaccination should be properly ascertained, in order that, in the one instance, too great confidence should not be placed on the length of time it affords this immunity, so in the other that its failures, which, by proper care, might have been obviated, do not cause an unfounded prejudice. It is a matter for the profession to ascertain whether the benefit of vaccination be for a limited period, and that, by adopting a system of revaccination at certain intervals, these failures might be prevented. During the past year the village of Saint Nicholas suffered severely from small-pox. A few weeks previous, the clergyman, who ever evinces great interest in the health of his parishioners, succeeded in getting the whole of the children vaccinated. Small-pox confined its ravages almost entirely to the adults; in no instance, coming under my observation, did a child take the disease, although in many houses the parent had it in a confluent form. The adults then were revaccinated and the disease was arrested.

I have now to direct your attention to the water supply. I think it may be said with truth that no town in the kingdom had a less proportionate public supply than Cardiff; and this was not only inadequate to the wants of the people in quantity, but much of it was also impure in quality. The establishment of a water works company has lately materially lessened the extent of this evil; but there are still many houses and courts inhabited by the working-class which are unsupplied; many of them can obtain it at the cost by which the Health of Town's Act enables you to compel a supply, and I would suggest the exercise of this power. Thus Star and Garter Court, Cox Court, Lloyd's Court, Landore Court, Kenton's Court, Robert's Court, Mathews's Court, Evans's Court, Old Gas Court, Whitmore Lane, and many other localities are without water,—all of these I have enumerated, with the exception of the last, are liable to this compulsory power. It is obvious, that if cleanliness is conducive to health, a sufficient and convenient means of obtaining water is a most important item, in all sanitary measures; and it is equally obvious that a large majority of the inhabitants whose dwellings, and persons, and clothes, most need cleansing, are the least disposed to go to the trouble of fetching water from a distance.

Another matter to which I would direct your especial attention is the burial accommodation,—it is a subject which must, necessarily, soon become, if it is not already, one which this town should take into consideration. The propriety of obtaining, at a convenient distance, a new burial ground must shortly be urgent. The injurious effects of intramural interment are proved from the evidence obtained from enquiries made by scientific men; when bodies are buried in a light and gravelly soil, as decomposition takes place gases are evolved, which pass readily through the earth, partly absorbed by it, but a considerable portion, even from the depths of some feet, finds its way upwards, directly polluting the air. Thus, Mr. Leigh, a chemist of Manchester, who has paid great attention to the subject, says, "If bodies were interred eight or ten feet deep in gravelly soils, I am convinced little would be gained by it; the gases would find an exit from almost any practicable depth, while it is obvious that their occasional escape would be still more easy through the fissures which are so common in a clayey soil."

Dr. Lyon Playfair says,—“I have examined various churchyards and burial-grounds for the purpose of ascertaining whether the layer of earth above the bodies is sufficient to absorb the putrid gases evolved. The slightest inspection shews that they are not thoroughly absorbed by the

soil lying over the bodies. I know several churchyards from which most foetid smells are evolved; and gases with similar odour are emitted from the sides of sewers passing in the vicinity of church-yards, although they may be more than thirty feet from them. If these gases are thus evolved laterally, they must be emitted in an upward direction."

When these gases are breathed even in a slight degree they endanger health. In a concentrated form they are speedily productive of serious disease. Mr. Aston Key, the celebrated surgeon, who died of cholera, in 1849, is said to have fallen a victim to that disease in consequence of a churchyard being close to his house. Within a few hours of his seizure, he had complained of the offensive odours arising from a grave in which some cholera corpses had been interred.

I have considered it my duty to inspect the several burial grounds in Cardiff, and have placed myself in communication with the various ministers, whom I have to thank for the kind and candid manner with which they afforded me every information. My attention was first directed to the Cemetery: this is, as you are aware, divided into two portions, one being allotted to the parishioners of Saint John's, the other to those of Saint Mary's. The Rev. T. Stacey says "that the portion provided for Saint John's will answer the requirements of that parish for about 40 years," but, in reply to my question, said, "the portion for Saint Mary's being expended, its parishioners would not be entitled to be buried in the part allotted to Saint John's."

The Rev. W. Leigh Morgan, after explaining to me the calculation that he has made on the subject, says, the number of burials in his parish, according to their present increasing rate, would exhaust his ground in about six years.

There are only four Chapels in Cardiff with burial-grounds attached to them; they are all surrounded by houses, and appear very full.

The Rev. W. Jones, of the English Bethany, says he buries from 30 to 40 members yearly, reserving the unoccupied ground for them. He declines to bury strangers. The available space will last only two years, but there might be bodies buried under the paving close to the chapel walls, it would then last about five years. This, I have to observe, is contrary, I believe, to the wishes of the Board of Health, namely, that bodies should be buried within a certain distance of the chapel walls, as being opposed to every system of sanitary reform and regulations.

The Rev. D. Jones, of the Welsh Baptist Chapel, calculates his burial accommodation will last about five years.

The Calvinistic Methodist Chapel is full; there has been only one interment there lately, and that in a vault.

The Welsh Independents bury, according to the Rev. J. D. Williams, from 30 to 35 yearly, and in five years they will have exhausted their grounds.

The results of these enquiries tend to shew that in about five years the whole of the burial ground in Cardiff, with the exception of that allotted to the Parish of St. John, will be entirely exhausted. When, therefore, we learn that the opinions of eminent and scientific men are so strong in reference to the dangers to be apprehended from intramural interment in populous towns; and when it is borne in mind that the present cemetery will shortly be in the midst of a dense population, that its soil being gravely is ill-adapted, under these circumstances, for burial purposes, with due regard to the safety of those who may reside near it, and that even its accommodation for the parishioners of Saint Mary's will in five years be expended, you may consider the time has arrived when the propriety

of obtaining another site for the interment of our dead at a convenient distance from the town should occupy the attention of your Board.

I have thus, Gentlemen, enumerated, in as concise a manner as the subject will admit, these matters connected with my office. I have endeavoured to make them broad and practical, rather than to go too minutely into the fields of theory and medical science, believing them better adapted for a lay board. And I have to assure you that in the coming season, when we have too much reason to dread a serious visitation, my best energies will be devoted, as I am certain yours will be, to meet its ravages under the most favourable circumstances the town will admit. It may not be given to us altogether to stay the death wave, but we may detect shoals and quicksands and hidden dangers, and the result may be to many life preserved and health promoted, while benefit will accrue to all in the shape of a diminished burden on the poor-rates.

I have the honour to be,

GENTLEMEN,

Your obedient Servant,

H. J. PAINE,

OFFICER OF HEALTH.